



MAR 11 2005

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomson

Examiner:
Art Unit: 1742

Serial No: 10/798,039

Filed: 03/11/2004

For: HIGH STRENGTH STEEL PRODUCT WITH IMPROVED FORMABILITY AND
STEEL MANUFACTURING PROCESS

Docket 8221

9213 Chillicothe Road
Kirtland, Ohio 44094

March 9, 2005

COMMISSIONER OF PATENTS
P. O. BOX 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§1.97 AND 1.98

Dear Sir:

A. (1) Applicant hereby discloses the following Documents pursuant to 37 C.F.R. §1.98:

<u>Publication No.</u>	<u>Publication Date</u>	<u>Inventor</u>
1. US 4,167,105	September 11, 1979	Harris
2. US 5,906,691	May 25, 1999	Burnett
3. Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No. 6, pp 636-644		
4. Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM, Bejing,		

China, 13-14 October, 2001, published by VANITEC, VANADIUM
INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT,
ENGLAND, 2002

5. Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF. PROC., ISS, VOL. XXXIX, 2001, PP.497-508
6. Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology International, Vol. 23, Issue No. 1, February 2000
7. Glowdowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented at the International Symposium On Thin Slab Casting and Rolling, Guangzhou, China, December 2002, pp.1-11.

B. Copies of the patents are not included but copies of the literature are included herewith pursuant to 37 C.F.R. §1.98.

C. Explanation of Relevance pursuant to 37 C.F.R. §1.98.

1. US 4,167,105 issued 9-11-1979 to Harris discloses a tandem mill drive control system.
2. US 5,906,691 issued May 25, 1999 to Burnett discloses an induction hardened microalloy steel having enhanced fatigue strength properties.
3. Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No.

6, pp 636-644 discloses the evolution of microstructure on two low carbon microalloyed steels.

4. Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM, Bejing, China, 13-14 October, 2001, published by VANITEC, VANADIUM INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT, ENGLAND, 2002 indicates that Vanadium has proven to be a popular choice as a microalloy for flat rolled sheet and plate steels.

5. Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF. PROC., ISS, VOL. XXXIX, 2001, PP.497-508 indicates that the work has concentrated on two strengthening mechanisms in V-microalloyed steels: (i) grain refinement by promoting the formation of intragranular ferrite, and (ii) the role of nitrogen and carbon in precipitation strengthening by interphase and random precipitation of V (C,N) in ferrite.

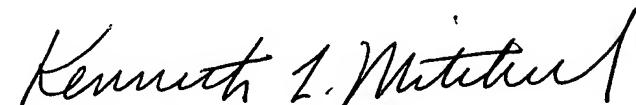
6. Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology International, Vol. 23, Issue No. 1, February 2000 indicates that the experiences gained during the past approximately 10 years show the CSP technology has successfully confronted the exacting challenges in regard to product range extension and implementation of modern material refining processes.

7. Glowdowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented at the International Symposium On Thin Slab Casting and Rolling, Guangzhou, China, December 2002, pp 1-11 indicates that Vanadium-nitrogen microalloying has proven to be highly compatible with the thin slab cast and direct charging steelmaking process.

No fee is believed due as this information disclosure statement is being timely filed. Please charge deposit account 23-3060 if any fee deficiency exists.

Respectfully submitted,

WOODLING, KROST & RUST



Kenneth L. Mitchell
Kenneth L. Mitchell
Reg. No. 36,873
(440) 256-4150

EV374958340US

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known

Application Number	10/798,039
Filing Date	March 11, 2004
First Named Inventor	Thomson
Art Unit	1742
Examiner Name	
Attorney Docket Number	8221

U. S. PATENT DOCUMENTS

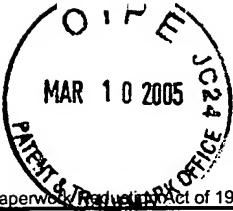
FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



MAR 10 2005

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO

Complete if Known

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet	2	of	2	Attorney Docket Number	8221
-------	---	----	---	------------------------	------

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	3	Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No. 6, pp 636-644	
	4	Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM,	
		Beijing, China, 13-14 October, 2001, published by VANITEC, VANADIUM INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT, ENGLAND, 2002	
	5	Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF. PROC., ISS, VOL. XXXIX, 2001, PP.497-508.	
	6	Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology International, Vol. 23, Issue No. 1, February 2000	
	7	Glowdowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented at the International Symposium On Thin Slab Casting and Rolling, Guangzhou, China, December 2002, pp.1-11.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.